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10/789,621	02/27/2004	James J. Dimsey	HBR-32209(1)	7656

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WHYTE HIRSCHBOECK DUDEK S C  
555 EAST WELLS STREET  
SUITE 1900  
MILWAUKEE, WI 53202

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



## Office Action Summary

Application No.

10/789,621

Applicant(s)

DIMSEY, JAMES J.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/30/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.



## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 8/5/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: element 200 mentioned on pg. 10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including



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annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Marked-up Drawings" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

### ***Specification***

4. The disclosure is objected to because of the following informalities: on pg. 8 the number "66" is used to designate both a return spring in line 5 and a pressure relief valve assembly in line 10, also the number "64" is used to designate both a passage and a return opening.

Appropriate correction is required.

### ***Claim Objections***

5. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 5 depends on itself. For examining purposes, Examiner has interpreted claim 5 as depending from claim 4.

6. Claim 3 is objected to because of the following informalities: it has two periods at the end of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.



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8. Claims 3, 7, 8, 10-13, and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 3. The phrase "the bias" in line 3 lacks proper antecedent basis.

Re: claims 7 and 8. The phrase "the master cylinder " in line 1 lacks proper antecedent basis. Also see line 1 of claim 8.

Re: claim 10. The phrase "the method" in line 1 lacks proper antecedent basis in the claim. The phrase "a pressure relief valve arrangement" in lines 2-3 is indefinite. It is unclear to the Examiner whether the arrangement in claim 10 is intended to be the same or different from that of claim 1. A similar issue exists with the recitation of "an internal cavity" in line 4 of claim 10.

Re: claim 11. The phrase "the pressure relief valve" in line 1 lacks proper antecedent basis in the claim. See also the phrase "the master cylinder" in lines 1-2.

Re: claim 12. The phrases "the valve body" and "the master cylinder reservoir" in lines 1 and 2 lack proper antecedent basis.

Re: claim 15. The phrase "the valve cylinder" in line 2 lacks proper antecedent basis.

Re: claim 16. The phrases "a master cylinder" in line 3 and "a pressure relief valve assembly" in lines 3 and 4 are indefinite. It is unclear to the Examiner whether the master cylinder and valve assembly in the body of the claim are intended to be the same or different from those recited in the preamble.



Re: claim 17. The phrases "The pressure relief valve assembly and master cylinder combination" in line 1 "the first spring" and "the second spring" in lines 2-3 and "the pressure vessel" in line 3 lack proper antecedent basis.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 3257809 to Yardley et al.

Re: claims 1, 9, and 12. Yardley et al. show in figure 2 a brake actuator for a disk brake system having a brake disk 14 and a caliper 13, comprising: a master cylinder body 32 defining a fluid reservoir 36, a piston 31 mounted to the master cylinder body, wherein the piston is movable relative to the master cylinder body between an extended position and a retracted position, wherein the piston and the master cylinder body are configured such that movement of the piston to the extended position displaces a quantity of fluid to operate the caliper in a first direction, and movement of the piston toward the retracted position returns a quantity of fluid toward the fluid reservoir through a pressurized fluid flow path shown in the area of element 34 and element 38 defined by the piston and the master cylinder body; and a pressure relief valve arrangement shown in the area of elements 39 and 41 interposed between the fluid flow path and the reservoir for controlling the flow of fluid to the reservoir upon



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movement of the piston between the extended and retracted positions, wherein the pressure relief valve arrangement is configured and arranged to selectively vent fluid from the fluid flow path to the fluid reservoir in the event pressure in the fluid flow path exceeds a predetermined threshold as disclosed in col. 3 lines 19-23.

Re: claims 2 and 13. Yardley et al. show in figure 2 the limitation wherein the pressure relief valve arrangement includes a valve body 37 defining an internal cavity in communication with the fluid flow path, wherein the valve body includes a relief port or opening at the top of cylinder 37 in communication with the fluid reservoir.

Re: claim 3. Yardley et al. show in figure 2 the brake actuator further comprising a biased valve member 39 movably mounted within the internal cavity, wherein the valve member is movable to an expanded position against the bias to accommodate introduction of fluid from the fluid flow path into the internal cavity upon movement of the piston toward the retracted position and to an at rest position under the influence of the bias to discharge fluid from the internal cavity to the fluid reservoir through a discharge port 38 associated with the master cylinder body upon movement of the piston toward the extended position.

Re: claim 4. Yardley et al. include the limitation wherein the valve member in the expanded and at rest positions prevents communication between the internal cavity and the fluid reservoir through the relief port particularly during normal replenishment of the system as disclosed in col. 3 lines 24-26.

Re: claims 5, 10, and 11. Yardley et al. disclose in col. 3 lines 32-34 the limitation wherein the valve member is further movable from the expanded position to a



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relief position against the bias (of element 41) when the pressure in the fluid flow path exceeds the predetermined threshold to enable fluid to flow from the internal cavity to the fluid reservoir through the relief port to relieve the fluid pressure in the fluid flow path.

Re: claim 6. Yardley et al. show in figure 2 the limitation wherein a fluid tight seal 33 is established between and among the internal cavity, the master cylinder reservoir and a master cylinder cartridge passage shown to the right of element 33.

Re: claims 7 and 8. Yardley et al. show in figure 2 the limitation of the master cylinder including a timing port 38 for establishing communication between the mc cartridge passage and an internal cavity defined by a pressure relief valve arrangement valve body 39 and a back up port 43.

Re: claim 14. In an alternate interpretation of claim 1 Yardley et al. show in figure 1 a brake actuator for a disk brake system having a brake disk 14 and a caliper 13, comprising: a master cylinder body 10 defining a fluid reservoir 15, a piston 11 mounted to the master cylinder body, wherein the piston is movable relative to the master cylinder body between an extended position and a retracted position, wherein the piston and the master cylinder body are configured such that movement of the piston to the extended position displaces a quantity of fluid to operate the caliper in a first direction, and movement of the piston toward the retracted position returns a quantity of fluid toward the fluid reservoir through a pressurized fluid flow path shown in the area to the right of element 11 including the path through element 18 and immediately to the right of element 18 defined (at least partially) by the piston and the



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master cylinder body; and a pressure relief valve arrangement 18 interposed between the fluid flow path and the reservoir for controlling the flow of fluid to the reservoir upon movement of the piston between the extended and retracted positions, wherein the pressure relief valve arrangement is configured and arranged to selectively vent fluid from the fluid flow path to the fluid reservoir in the event pressure in the fluid flow path exceeds a predetermined threshold as disclosed in col. 2 lines 30-34 .

Specifically regarding claim 14: the brake actuator of Yardley et al. in the new interpretation has the arrangement which includes a major bias member 28 and minor bias member 25 and wherein the arrangement has an assembled at rest state wherein the valve piston 24 compresses the minor bias member and does not compress the major bias member as shown in figure 1.

Re: claim 15. In the alternate interpretation the brake actuator of Yardley et al. further includes a cap 21 which is secured to an upper end of the valve cylinder shown in the area of element 18 as shown in figure 1.

Re: claim 18. Yardley et al. show in figure 1 a method of reducing caliper piston knockback using a brake master cylinder 10, the method comprising: displacing a pressure relief valve assembly piston 19 to contact and compress a first spring 28 and a second spring 25 concentric with the first spring, thereby drawing a fluid into a pressure vessel shown in the area of element 27 and transferring the fluid from the pressure vessel to a reservoir 15 located within the master cylinder, thereby reducing caliper piston knockback as disclosed in col. 2 lines 35-40.



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11. Claims 1 and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5018353 to Pugh.

Re: claims 1 and 13. Pugh shows in figure 1 a brake actuator for a disk brake system having a brake disk and a caliper 18, comprising: a master cylinder body 26 defining a fluid reservoir 32, a piston 42 mounted to the master cylinder body, wherein the piston is movable relative to the master cylinder body between an extended position and a retracted position, wherein the piston and the master cylinder body are configured such that movement of the piston to the extended position displaces a quantity of fluid to operate the caliper in a first direction, and movement of the piston toward the retracted position returns a quantity of fluid toward the fluid reservoir through a pressurized fluid flow path 94,142 defined by the piston and the master cylinder body; and a pressure relief valve arrangement shown in the area of elements 86 and 112 interposed between the fluid flow path and the reservoir for controlling the flow of fluid to the reservoir upon movement of the piston between the extended and retracted positions, wherein the pressure relief valve arrangement is configured and arranged to selectively vent fluid from the fluid flow path to the fluid reservoir in the event pressure in the fluid flow path exceeds a predetermined threshold (particularly when the pressure causes element 42 to move a little further rightwardly as disclosed in col. 5 lines 42-43.

Re: claim 14. The brake actuator of Pugh has the arrangement which includes a major bias member 28 and minor bias member 25 and wherein the arrangement has an assembled at rest state wherein the valve piston 42 compresses the minor bias member 138 and does not compress the major bias member 136 as shown in the figure.



Re: claim 15. Pugh shows in the figure the brake actuator further comprising a cap 132 which is secured to an upper end of the valve cylinder via intervening elements and as best understood.

Re: claim 16. Pugh shows in the figure a pressure relief valve assembly shown in the area of elements 112 and 86 in combination with a master cylinder 26, the combination comprising a master cylinder having a master cylinder reservoir 32,94,96 and a pressure relief valve assembly positioned within the master cylinder reservoir, the assembly comprising a pressure vessel 74 for displacing a fluid, the pressure vessel comprising a valve body 34, a generally u-shaped cup seal 56 disposed adjacent the valve body, and a piston 40 in sealing contact with the generally u-shaped cup seal, a first spring 138 located adjacent the pressure vessel piston via intervening elements, a second spring 64 adjacent the pressure vessel piston via intervening elements and concentric with the first spring and a cap 132 in engagement with the first spring, wherein the second spring is preloaded to have a higher installed force and a higher spring rate than the first spring as disclosed in col. 5 lines 5-8.

Re: claim 17. Pugh shows in the figure the limitation wherein the piston moves to contact the first spring 138, compress the first spring and compress the second spring, fluid is drawn into the pressure vessel as disclosed in col. 5 lines 1-3 thereby relieving a knockback pressure from the master cylinder reservoir as best understood.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4852352 to Leigh-Monstevens and 4398390 to



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Gaiser teach the use of pressure relief valve arrangements between a master cylinder fluid flow path and the reservoir.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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January 19, 2005

Melody M. Burch

1/19/05